PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Wesley Blackaby, et al.		
Serial No.:	10/593,950	Case No.: 21573YP	Examiner: Craig D Ricci
Filing Date:	May 10, 2007		
For:	HETEROARYL PIPERIDINE GLYCINE TRANSPORTER INHIBITORS		

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

Sir:

This communication is in reply to the Restriction Requirement dated November 17, 2008, setting forth a statutory period for reply ending December 17, 2008.

The Examiner requires election of one of Groups I to XXX as set forth at pages 2 to 5 of the Office action. The Examiner also requires provisional election of a single species for prosecution.

In response, applicants elect Group I, with traverse. Applicants acknowledge the Advisory of Rejoinder beginning at page 7 of the Office action stating that process claims commensurate in scope with allowed product claims will be rejoined pursuant to M.P.E.P. § 821.04.

In response to the species election requirement, applicants elect compound III-5, which is described at page 35 of the specification, with traverse, defined as a compound of Formula I wherein R^1 is hydrogen, R^2 is phenyl, R^{2a} is 2-chloro, R^{2b} is 4-chloro, R^{2c} is hydrogen, R^3 is ethyl, R^4 is methyl in the (S) configuration, R^5 is hydrogen, R^6 is hydrogen, m is zero and W, X, Y and Z are C forming a pyridine. This provisional election of species is being made for purposes of facilitating the Examiner's search in accordance with the

procedures set forth in M.P.E.P. § 803.02. Claims encompassing the elected specie are Claims 1 to 8, 11 to 14, 18, 19 and 22. Claim 23 encompasses the elected specie as part of a pharmaceutical composition.

The Examiner alleges the restricted claims lack a special technical feature because they fail to make a contribution over *Burnett* et al. The examiner further alleges it would be obvious to substitute phenyl with pyridine since *Wermuth* teaches that these two rings are known biosteres. Applicants respectfully disagree. First, Applicants note the difference from phenyl to pyridine is not the only structural difference between the claimed compounds and those taught by *Burnett*. The claims of the subject application are directed to compounds having the group $-C(R^4)(R^5)$-NH-C(O)- bonded at the 4-position of the center piperidine, while the *Burnett* compound identified by the Examiner at page 6 of the Office action has –N-C-C(O)- at this position. One skilled in the art would in no way be motivated to modify this particular group of the *Burnett* compounds in such a way as to arrive at the present invention.

Second, Applicants assert *Wermuth* does not provide the necessary motivation to replace the phenyl ring of the *Burnett* compounds with a pyridine ring. *Wermuth* does not teach any such equivalence in the context of compounds having activity as MCH antagonists. Furthermore, *Wermuth* at page 211 states the following:

> In all these cases no *essential* activity difference is found between the original drug and its isotere. However, it can happen that the procedure fails. Binder et al., for example reported that thieno[2,3-*d*]isoxazole-3-methanesulfonamide, the thiophene analogue of the anticonvulsant drug zonisamide …, was practically inactive against pentetrazole- or electric shock induced convulsions in mice, even at high doses.

Thus, *Wermuth* itself teaches that substitution from one ring to another does not necessarily translate into retained activity due to the high level of unpredictability in the chemical arts. Applicants submit that *Wermuth* does not support the Examiner's assertion that one skilled in the art would be motivated to substituted phenyl for pyridine in this case.

In sum, Applicants submit that the presently claimed compounds possess numerous non-obvious structural differences as compared to the compounds of *Burnett*. As such, the present claims posses a special technical feature and satisfy the unity of invention requirement.

In view of the action taken, it is believed that applicants have satisfied the restriction requirement and the species election. An early and favorable examination is earnestly solicited. Any fees required in connection to this Response may be taken from Merck Deposit Account No. 13-2755.

Respectfully submitted,

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